

AMENDMENTS TO CLAIMS

This listing of claims will replace all prior listings, and versions, of the claims in this application.

1.-7. (cancelled)

8. (currently amended) A ~~non-adhesive~~ rubber vulcanate comprising rubber mixtures, which comprise uncrosslinked, double-bond containing rubbers (A), crosslinked rubber particles (B), multifunctional isocyanates (C), wherein the amount of component (B) in the mixture is from 1 to 150 parts by weight and the amount of multifunctional isocyanates (C) is from 1 to 100 parts by weight, in each case based on 100 parts by weight (phr) of the rubber component (A) and wherein said crosslinked rubber particles (B) have particle diameters of from 5 to 1000 nm and swelling indices in toluene of from 1 to 15 and wherein the gel content of the rubber particles (B) is from 80 to 100 wt.% wherein said rubber vulcanate is utilized in molded rubber bodies selected from the group consisting of cable sheaths, hoses, drive belts, conveyor belts, roller coverings, tire components, shoe soles, gaskets, damping elements and membranes.

9. (currently amended) A molded ~~non-adhesive~~ rubber body comprising a vulcanate rubber which comprise a rubber mixture comprising uncrosslinked, double-bond containing rubbers (A), crosslinked rubber particles (B), multifunctional isocyanates (C), wherein the amount of component (B) in the mixture is from 1 to 150 parts by weight and the amount of multifunctional isocyanates (C) is from 1 to 100 parts by weight, in each case based on 100 parts by weight (phr) of the rubber component (A) and wherein said crosslinked rubber particles (B) have particle diameters of from 5 to 1000 nm and swelling indices in toluene of from 1 to 15 and wherein the gel content of the rubber particles (B) is from 80 to 100 wt.% wherein said molded rubber body is selected from the group consisting of cable sheaths, hoses, drive belts, conveyor belts, roller coverings, tire components, shoe soles, gaskets, damping elements and membranes.

10.-22. (cancelled)

23. (currently amended) The ~~non-adhesive~~ rubber vulcanate according to Claim 8, wherein said crosslinked rubber particles (B) are present in from 5 to 100 parts by weight and said multifunctional isocyanates (C) are present in from 3 to 50 parts by weight, in each case based on 100 parts by weight of the rubber component (A).

24. (currently amended) The ~~non-adhesive~~ rubber vulcanate according to Claim 8, wherein said multifunctional isocyanates (C) contain isocyanates having at least two isocyanate groups in the molecule.

25. (currently amended) The ~~non-adhesive~~ rubber vulcanate according to Claim 24, wherein said multifunctional isocyanates (C) are selected from the group consisting of hexamethylene diisocyanate, 1-isocyanato-3-(isocyanatomethyl)-3,5,5-trimethylcyclohexane, 2,4- and 2,6-diisocyanatotoluene as well as the corresponding technical isomeric mixture, diphenylmethane diisocyanates, diphenylmethane 4,4'-diisocyanate, diphenylmethane 2,4'-diisocyanate, diphenylmethane 2,2'-diisocyanate as well as the corresponding technical isomeric mixtures, naphthalene 1,5-diisocyanate and 4,4',4''-triisocyanatotriphenylmethane.

26. (currently amended) The ~~non-adhesive~~ rubber vulcanate according to Claim 8, wherein said uncrosslinked, double-bond-containing rubbers (A) are selected from the group consisting of natural rubber, styrene/butadiene rubber, polybutadiene rubber, nitrile rubber, butyl rubber, brominated isobutylene/isoprene copolymers having bromine contents of from 0.1 to 10 wt.% based on 100 wt.% of said brominated isobutylene/isoprene copolymer, chlorinated isobutylene/isoprene copolymers having chlorine contents of from 0.1 to 10 wt.% based on 100 wt.% of said chlorinated isobutylene/isoprene copolymer, hydrogenated or partially hydrogenated nitrile rubber, styrene/butadiene/acrylonitrile rubber, polychloroprene, epoxidized natural rubber or mixtures thereof, carboxylated nitrile rubbers and carboxylated styrene/butadiene copolymers.

27. (currently amended) The ~~non-adhesive~~ rubber vulcanate according to Claim 8, wherein said crosslinked rubber particles (B) include those which have been obtained by crosslinking of the following rubbers: polybutadiene, butadiene/acrylic acid C₁₋₄-alkyl ester copolymers, polyisoprene, styrene/butadiene copolymers having styrene contents of from 1 to 60 wt.%, based on 100 wt.% of the styrene/butadiene copolymer, carboxylated styrene/butadiene copolymers, fluorine rubber, acrylate rubber, polybutadiene/acrylonitrile copolymers having acrylonitrile contents of from 5 to 60 wt.% based on 100 wt.% of the polybutadiene/acrylonitrile copolymer, carboxylated nitrile rubbers, polychloroprene, isobutylene/isoprene copolymers having isoprene contents of from 0.5 to 10 wt.% based on 100 wt.% of the isobutylene/isoprene copolymers, brominated isobutylene/isoprene copolymers having bromine contents of from 0.1 to 10 wt.% based on 100 wt.% of the brominated isobutylene/isoprene copolymers, chlorinated isobutylene/isoprene copolymers having chlorine contents of from 0.1 to 10 wt.% based on 100 wt.% of the chlorinated isobutylene/isoprene copolymers, partially and completely hydrogenated nitrile rubbers, ethylene/propylene/diene copolymers, ethylene/acrylate copolymers, ethylene/vinyl acetate copolymers, epichlorohydrin rubbers, silicone rubbers, polyester urethane polymers and polyether urethane polymers.

28. (currently amended) The ~~non-adhesive~~ rubber vulcanate according to Claim 27, wherein said styrene/butadiene copolymers have styrene contents of from 5 to 50 wt.% based on 100 wt.% of said styrene/butadiene copolymer.

29. (currently amended) The ~~non-adhesive~~ rubber vulcanate according to Claim 8, wherein the crosslinked rubber particles (B) comprise functional groups that are capable of reacting with isocyanates.

30. (currently amended) The ~~non-adhesive~~ rubber vulcanate according to Claim 29, wherein said crosslinked rubber particles (B) have been functionalized with hydroxyl, carboxyl, amino and/or amide groups.

31. (currently amended) The ~~non-adhesive~~ rubber vulcanate according to Claim 8, wherein the rubber mixtures additionally comprise vulcanization accelerators.

32. (currently amended) The ~~non-adhesive~~ rubber vulcanate according to Claim 31, wherein the vulcanization accelerators are mercaptosulfenamides.